

**REMARKS**

Upon entry of the present amendment, claims 1-20 remain in the application. Of these, claims 1, 8, 14 and 15 are independent.

The above-identified Office Action has been reviewed, the references carefully considered, and the Examiner's comments carefully weighed. In view thereof, the present Amendment is submitted. It is contended that by the arguments and amendments presented herein, all bases of rejection set forth in the Office Action are traversed and overcome. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

**Claim Rejections – 35 USC 103**

In the above-identified Office Action, the Examiner rejected claims 1-7, 10-14, and 16-20 under 35 USC 103(a) as unpatentable over Ito et al., US Pat. No. 6,443,263, in view of Kawamoto, US Pat. No. 6,470,847.

In the rejection, the Examiner stated that Ito discloses a multi-cylinder engine with an engine block having a plurality of oil galleries formed therein, and having an oil tank 20 and balancer 6 each respectively attached to a front central portion of the engine.

The Examiner further took official notice that in his view, it would be inherent for the oil from the oil cooler to be introduced to a substantially central part of a main oil gallery formed in the engine block.

**Applicant's Response**

Upon careful review of Ito et al., the applicant notes that Ito discloses an oil tank for an internal combustion engine used on a saddle-type four wheeled vehicle. The engine disclosed by Ito is disposed such that the crankshaft 5 of the engine extends in the longitudinal (ie, front-to-

rear) direction of the vehicle (Fig. 2, col 3, lines 3-4). The engine of Ito is described as a drive sump type internal combustion engine (column 1, lines 6-8 and lines 12-15), which applicant respectfully submits is a type of dry sump engine, with the majority of the engine oil kept and stored in a separate oil storage tank (20), rather than in a reservoir formed in the bottom of the oil pan, as in applicant's claimed engine design. Indeed, Ito's engine uses two separate scavenging pumps 65, 66 to prevent accumulation of oil in oil sumps 65a, 66a at the bottom of the crankcase. (Ito, column 5, lines 50-53).

The engine of Ito appears to be a single cylinder engine, including a cylinder for housing a piston 31, and the oil tank 20 mounted on a front surface of the engine, so as to be adjacent to an end of the crankshaft.

The Examiner has taken the position, on page 2 of the Office Action, that Ito's engine includes a balance shaft 6 disposed at the front of the engine. Applicant disagrees with this assertion, and respectfully points out that the shaft 6 of Ito is described in the reference as an output shaft 6 for driving the rear wheels of the vehicle (Ito, col. 3, lines 6-9; col. 4, lines 64-65; col. 5, lines 1-7).

The engine disclosed in Ito also includes an oil cooler 70 and an oil filter 67, shown schematically in Fig. 4 as external to the oil pump 63, without providing specific locations for these components.

Upon careful review of Kawamoto et al, the applicant finds that Kawamoto discloses a multi-cylinder engine 10 for a motorcycle in which the cylinders are aligned in the transverse (ie left-to-right) direction of the vehicle, the engine having a oil filter 52 (including a filter element) and oil cooler 44 arranged thereon to permit tools to be used with the oil filter and cooler without interference from exhaust pipes 32. In all disclosed embodiments, the oil filter and cooler are arranged side by side on the lower front face of the engine (col. 2, line 23-25, Figs 3-

6), and exhaust hoses are positioned to permit tool access. An oil pan 48 is also provided at the bottom of the engine case of Kawamoto.

The applicant respectfully disagrees with the rejection of the claims, since the Examiner has not established a prima facie case for the obviousness-type rejection.

With respect to claim 1, contrary to the statements of the Examiner, Ito does not disclose a multi-cylinder engine block, but instead discloses a single cylinder engine, as shown in Fig. 3, and described in col. 4, lines 17-26. In addition, Ito does not disclose a balancer. The applicant respectfully notes that the shaft 6 interpreted by the Examiner as a balancer is disclosed as the output shaft between the engine and wheels (col. 3, lines 6-9). This deficiency is not cured by the teachings of Kawamoto, who also fails to disclose a balancer. The applicant notes that the Examiner is reading features into the references which are not taught by a fair reading thereof.

The applicant agrees that Ito fails to disclose a specific location for the oil cooler, and that Kawamoto discloses an oil cooler positioned on the front portion of the engine.

The applicant submits that Ito is also silent with respect to placement of the oil filter 67, but disagrees that Kawamoto teaches an oil filter 52 attached to the side surface of the engine block. The applicant respectfully requests that the Examiner re-read the cited portion of the Kawamoto disclosure (col 5, lines 8-13). Contrary to the Examiner's assertion in the Office Action, at col. 5, lines 8-3, Kawamoto discloses that an oil passage (not shown) is attached to the engine case side 10a, rather than the oil filter 52 itself. The applicant further submits that Kawamoto shows the oil filter and cooler disposed side by side on the lower front face of the engine (col. 2, line 23-25, col. 5, lines 9-10, Figs 3-6) in all disclosed embodiments (columns 5 and 6). Thus, neither Ito, nor Ito as modified by Kawamoto, teach an oil filter mounted to a side of an engine, as recited by the applicant in claim 1.

In further regards to claim 1, the applicant respectfully disagrees that it is inherent to

introduce oil from the oil cooler to a substantially central part of the main oil gallery formed in the engine block, since this positioning is determined by many factors, including engine type, configuration, and orientation on the vehicle body, as well as the corresponding positions of the cooling system components such as oil pump, coolers, filters, and the oil pan. More importantly, applicant's engine includes an oil supply passage D extending from an area proximate the oil cooler to a medial portion of the main oil gallery, as clearly shown in Figure 6 of the drawings, and as described in paragraph [037] of applicant's specification. Thus, the location of oil introduction is specific to the particulars of the application, and this has not been established for the combination of Ito and Kawamoto. Moreover, since Ito alone, or as modified by Kawamoto, do not suggest or disclose the structure and arrangement claimed by the applicant, it is not inherent that the structure of Ito as modified by Kawamoto would result in an oil introduction location claimed by the applicant.

Applicant notes for the record that MPEP 2144.03 gives clear guidelines on when it is appropriate for a patent Examiner to rely on information asserted to be "common knowledge" in the art. Applicant respectfully suggests that this standard also applies to the Examiner's assertion of inherency in the present application. Applicant reproduces pertinent sections of that MPEP section herein, in an effort to assist the Examiner. All quoted material is inset to the right.

MPEP 2144.03 Reliance on Common Knowledge in the Art or "Well Known" Prior Art

PROCEDURE FOR RELYING ON COMMON KNOWLEDGE OR TAKING OFFICIAL NOTICE

The standard of review applied to findings of fact is the "substantial evidence" standard under the Administrative Procedure Act (APA). See *In re Gartside*, 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000). See also MPEP § 1216.01. In light of recent Federal Circuit decisions as discussed below and the substantial evidence standard of review now applied to USPTO Board decisions, the following guidance is provided in order to assist the examiners in determining when it is appropriate to take official notice of facts without supporting documentary evidence or to rely on common knowledge in the art in making a rejection, and if such official notice is taken, what evidence is necessary to support the examiner's conclusion of common knowledge in the art.

**A. Determine When It Is Appropriate To Take Official Notice Without Documentary Evidence To Support The Examiner's Conclusion**

Official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection or action under 37 CFR 1.113. Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be "capable of such instant and unquestionable demonstration as to defy dispute" (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)). In *Ahlert*, the court held that the Board properly took judicial notice that "it is old to adjust intensity of a flame in accordance with the heat requirement." See also *In re Fox*, 471 F.2d 1405, 1407, 176 USPQ 340, 341 (CCPA 1973) (the court took "judicial notice of the fact that tape recorders commonly erase tape automatically when new 'audio information' is recorded on a tape which already has a recording on it"). In appropriate circumstances, it might not be unreasonable to take official notice of the fact that it is desirable to make something faster, cheaper, better, or stronger without the specific support of documentary evidence. Furthermore, it might not be unreasonable for the examiner in a first Office action to take official notice of facts by asserting that certain limitations in a dependent claim are old and well known expedients in the art without the support of documentary evidence provided the facts so noticed are of notorious character and serve only to "fill in the gaps" which might exist in the evidentiary showing made by the examiner to support a particular ground of rejection. In *re Zurko*, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001); *Ahlert*, 424 F.2d at 1092, 165 USPQ at 421.

It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. In *re Ahlert*, 424 F.2d at 1091, 165 USPQ at 420-21. See also *In re Grose*, 592 F.2d 1161, 1167-68, 201 USPQ 57, 63 (CCPA 1979) ("[W]hen the PTO seeks to rely upon a chemical theory, in establishing a prima facie case of obviousness, it must provide evidentiary support for the existence and meaning of that theory."); *In re Eynde*, 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973) ("[W]e reject the notion that judicial or administrative notice may be taken of the state of the art. The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amenable to the taking of such notice.").

It is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 ("[T]he Board cannot simply reach conclusions based on its own understanding or experience or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings."). While the court explained that, "as an administrative tribunal the Board clearly has expertise in the subject matter over which it exercises jurisdiction," it made clear that such "expertise may provide sufficient support for conclusions [only] as to peripheral issues." *Id.* at 1385-86, 59 USPQ2d at 1697. As the court held in *Zurko*, an

assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support. *Id.* at 1385, 59 USPQ2d at 1697. See also *In re Lee*, 277 F.3d 1338, 1344-45, 61 USPQ2d 1430, 1434-35 (Fed. Cir. 2002) (In reversing the Board's decision, the court stated " 'common knowledge and common sense' on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation..The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies.").

**B. If Official Notice Is Taken of a Fact, Unsupported by Documentary Evidence, the Technical Line Of Reasoning Underlying a Decision To Take Such Notice Must Be Clear and Unmistakable**

Ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge. See *Lee*, 277 F.3d at 1344-45, 61 USPQ2d at 1434-35 (Fed. Cir. 2002); *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (holding that general conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection). In certain older cases, official notice has been taken of a fact that is asserted to be "common knowledge" without specific reliance on documentary evidence where the fact noticed was readily verifiable, such as when other references of record supported the noticed fact, or where there was nothing of record to contradict it. See *In re Soli*, 317 F.2d 941, 945-46, 137 USPQ 797, 800 (CCPA 1963) (accepting the examiner's assertion that the use of "a control is standard procedure throughout the entire field of bacteriology" because it was readily verifiable and disclosed in references of record not cited by the Office); *In re Chevenard*, 139 F.2d 711, 713, 60 USPQ 239, 241 (CCPA 1943) (accepting the examiner's finding that a brief heating at a higher temperature was the equivalent of a longer heating at a lower temperature where there was nothing in the record to indicate the contrary and where the applicant never demanded that the examiner produce evidence to support his statement). If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. See *Soli*, 317 F.2d at 946, 37 USPQ at 801; *Chevenard*, 139 F.2d at 713, 60 USPQ at 241. The applicant should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to challenge the assertion in the next reply after the Office action in which the common knowledge statement was made.

**C. If Applicant Challenges a Factual Assertion as Not Properly Officially Noticed or not Properly Based Upon Common Knowledge, the Examiner Must Support the Finding With Adequate Evidence**

To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. See 37 CFR 1.111(b). See also *Chevenard*, 139 F.2d at 713, 60 USPQ at 241 ("[I]n the absence of any demand by appellant for the examiner to produce authority for his statement, we will not consider this contention."). A general allegation that the claims define a patentable invention without any reference to the examiner's assertion of official notice would be inadequate. If applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in

the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also Zurko, 258 F.3d at 1386, 59 USPQ2d at 1697 ("[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings" to satisfy the substantial evidence test). If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2).

[End of quoted MPEP material]

Applicant respectfully challenges the Examiner's assertion, that it would be inherent for the oil from the oil cooler to be introduced to a substantially central part of a main oil gallery formed in the engine block, as not having been properly officially noticed, and not properly based upon common knowledge. Applicant respectfully requests that the Examiner produce documentary evidence to support this assertion, as required by MPEP 2144.03, if such assertion is maintained.

Moreover, applicant has amended the language of claim 1 to particularly point out and distinctly claim that the engine block is configured with a main oil gallery and an oil supply passage formed therein, said oil supply passage extending from an area proximate the oil cooler to a medial portion of the main oil gallery, so that oil from said oil cooler is introduced via the oil supply passage to a substantially central part of the main oil gallery formed in said engine block.

Applicant respectfully submits that the structural features set out in amended claim 1 are not taught, suggested, nor rendered obvious by Ito, Kawamoto or any of the other references of record, whether considered individually or in any reasonable combination thereof. Applicant therefore requests reconsideration and withdrawal of the rejection of claim 1.

As regards claim 2, the Examiner states that Ito's crankshaft 5 has a plurality of crank webs, and that the "balancer" includes a driven gear 57 meshed with a drive gear 48 on the

crankshaft via counter shaft 50 so as to thereby drive the balancer.

The applicant respectfully disagrees with the rejection of claim 2, as well as the rejections of claims 6, 9, and 11, since neither Ito nor Kawamoto disclose a balancer. The applicant respectfully notes that the shaft 6 interpreted by the Examiner as a balancer is disclosed as the output shaft between the engine and wheels (col. 3, lines 6-9), which is indeed driven by the crankshaft via the transmission 40.

As regards claims 3 and 10, the applicant respectfully disagrees that Kawamoto requires that the oil filter is detachable without interference from components of the engine, or that the oil filter of Kawamoto is easily removable. The applicant submits that Kawamoto discloses an oil filter 52 secured to a front face of the engine 10 at a location which underlies the exhaust pipes 32, and that Kawamoto merely teaches positioning of the exhaust pipes so that a tool can be inserted near the oil filter and used to detach the oil filter. The exhaust pipes of Kawamoto remain in a location which interferes with the detachment of the oil filter, since the oil filter lies between the engine housing and the exhaust pipes.

In contrast, the applicant's claimed engine structure recites an oil filter mounted to a side portion of the engine, rather than the front face thereof, so that interference with exhaust pipes is avoided, and access to the oil filter is unimpaired.

As regards claims 4-5, 7, 12 and 13, while Kawamoto's engine does have some components resembling the claimed features thereof, these claims depend from claim 1, and since claim 1 avoids rejection in view of the cited references, claims 4-5, 7, 12 and 13 also avoid rejection in view of the cited references.

As regards independent claim 14, the applicant respectfully disagrees with the rejection of claim 14 since the Examiner has not established a prima facie case for the obviousness-type



rejection. In particular, Ito discloses a single cylinder engine mounted longitudinally within the vehicle frame such that the longitudinal axis of the crankshaft is perpendicular to the front surface of the engine block, and fails to disclose a balancer within the engine block. Modification of Ito to include an oil cooler attached to a front face of the engine, as taught by Kawamoto, does not cure the deficiencies of the Ito reference.

As regards claims 16-18, the applicant respectfully disagrees with the rejection of these claims since neither Ito nor Kawamoto disclose a balancer. The applicant respectfully notes that the shaft 6 interpreted by the Examiner as a balancer is disclosed as the output shaft between the engine and wheels (col. 3, lines 6-9), which is indeed driven by the crankshaft via the transmission 40.

As regards claim 19, the applicant respectfully disagrees with this rejection, since neither Ito nor Kawamoto disclose introducing oil to a substantially central part of a main oil gallery, as recited in the claim. The applicant further respectfully disagrees that introduction at such a location is inherent, as discussed above with respect to claim 1.

As regards claim 20, the applicant respectfully disagrees with this rejection since Ito does not disclose a motorcycle, but instead discloses a saddle-type four wheeled vehicle. Moreover, Ito does not disclose a multi-cylinder engine mounted transversely in the vehicle frame, as recited in this claim.

Because the features recited in claims 1-7, 10-14, and 16-20 are not suggested or disclosed by the cited references, alone or in combination, claims 1-7, 10-14, and 16-20 are patentable in view of these references, and withdrawal of the rejection of these claims is respectfully requested.

#### **Allowable Subject Matter**

The applicant gratefully acknowledges the Examiner's indication that claims 8, 9, and 15, objected to for being dependent upon a rejected base claim, would be allowable if rewritten in independent form. Claims 8 and 15 have been made independent by the present amendment. Applicant therefore requests allowance of claims 8, 9 and 15.

**CONCLUSION**

Based on all of the foregoing, applicant respectfully submits that all of the objections and rejections set forth in the Office Action are overcome, and that as currently listed, all of the pending claims are believed to be allowable over all of the references of record, whether considered singly or in combination. Applicant therefore requests reconsideration and withdrawal of the rejection of record, and allowance of the pending claims.

The Commissioner is hereby authorized to charge the \$200 fee for one independent claim in excess of three, as well as to charge any deficiency, or credit any excess paid, to Deposit Account 50-0744 in the name of Carrier, Blackman & Associates, P.C. A duplicate copy of this sheet is enclosed.

If the Examiner is not fully convinced of all of the claims now in the application, applicant respectfully requests that the Examiner telephonically contact applicant's undersigned representative to expeditiously resolve prosecution of the application.

Favorable consideration is respectfully requested.

Respectfully submitted,

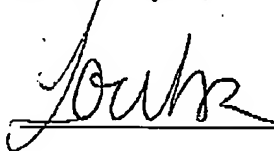


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**CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that this correspondence is being transmitted, via facsimile, to the United States Patent and Trademark Office on July 29, 2005.



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